

IN THE CLAIMS:

1. (Currently Amended) A line light irradiation device comprising:

multiple light emitting parts each of which is provided with an optical fiber band
and a columnar lens wherein the optical fiber band comprises a light irradiating part where
formed by arranging light leading out end portions of multiple optical fibers ~~are thickly arranged~~
5 in a straight line or in multiple straight lines ~~with light leading out end portions of the multiple~~
~~optical fibers forming a straight line of a predetermined width,~~ and a binding part formed by
binding light introducing end portions of the optical fibers and the columnar lens is arranged to
extend along a direction of the straight line in front of the light irradiating part in pairs, and that
irradiate line light that converges into ~~[[a]]~~ the straight line; and

10 a holding body that is arranged to face to ~~a work as being~~ an object on which the
straight line light is to be irradiated, on which a monitoring bore is arranged to penetrate in order
to monitor the ~~[[work]]~~ object, ~~and that the holding body~~ holds the light emitting parts so that
each optical axis ~~[[face]]~~ of the line light irradiated from each of the light emitting parts crosses
on a predetermined straight line, wherein

15 predetermined lengths of the multiple optical fibers of the optical fiber band are
made to be different so that the binding part is located to deviate to either one of two directions
with respect to a center line of the light irradiating part and two identical optical fiber bands are
mounted with their front and back sides turned upside down in the holding body so that the
location of each adjacent binding part is different.

2. (Currently Amended) The line light irradiation device described in claim 1,
wherein each light emitting part is arranged on the holding body so that the optical axis ~~[[face]]~~

of the line light irradiated from each light emitting part is arranged radially viewed from the above-mentioned direction of the line.

3. (Currently Amended) The line light irradiation device described in claim 1, wherein ~~[[each]]~~ the columnar lens is arranged generally on a straight line viewed from the above-mentioned direction of the line.

4. (Currently Amended) The line light irradiation device described in claim 1, wherein the light irradiating part further comprises a pair of pinching plates and the pinching plates hold the light leading out end portions of the multiple optical fibers by pinching them between the pair of pinching plates.

5.-6. (Cancelled)

7. (Currently Amended) The line light irradiation device described in claim 1, wherein the light source that introduces light into the optical fibers is a power LED that ~~[[can]]~~ continuously ~~[[flow]]~~ flows current greater than or equal to 200mA.

8. (Currently Amended) The line light irradiation device described in claim 1, wherein a distance between the light irradiating part and the columnar lens ~~can be varied~~ is adjustable.

9. (Currently Amended) The line light irradiation device described in claim 1, wherein the light emitting part is rotatably ~~around~~ about a rotational axis that is parallel to the direction of the straight line and the rotational angle ~~can be set~~ at a fixed position.

10. (Currently Amended) The line light irradiation device described in claim 1, wherein the multiple light irradiating parts are arranged serially along the above-mentioned direction of the straight line.

11. (Original) The line light irradiation device described in claim 10 wherein each length of the light emitting part is identical.

12. (Currently Amended) The line light irradiation device described in claim 10, wherein ~~[[the]]~~ a light source is arranged for each of the light irradiating parts individually.

13. (Currently Amended) A line light irradiation device comprising:

a light source;

multiple light emitting parts, each of which is provided with a light irradiating part where multiple optical fibers with light introducing end portions are bundled into a
5 substantial cylindrical form and aligned with the light source, ~~are closely~~ and arranged in a line ~~or in multiple lines~~ with light leading out end portions of the respective multiple optical fibers for forming a straight line of a predetermined width;

a plurality of columnar lens, each arranged to extend along a direction of ~~[[the]]~~ a respective line in front of each of the light irradiating parts, and ~~each irradiate a respective line~~
10 ~~light to converge~~ light onto ~~[[a]]~~ the straight line;

a holding body that is arranged to align with an object on which the line light is to be irradiated, including a monitoring bore arranged to enable a monitoring of the ~~[[work]]~~ object, the holding body holds the light emitting parts so that each optical axis of ~~the line~~ light irradiated from each of the light emitting parts crosses at a predetermined straight line, and

15 [[a]] binding [[part]] parts that [[is]] are formed by binding each of the respective
light introducing end portions of the optical fibers in the substantially cylindrical form, wherein
each length of all or a part of the optical fibers are different so that the binding
part is located to deviate to either one of two directions in a plane view with respect to a center
line of the light irradiating part and the respective adjacent binding parts are configured to
20 alternate in deviation to enable adjacent optical fibers to spread into linear arrays that are turned
upside down from each other to provide a stacked compact configuration.

14. (Previously Presented) The line light irradiation device described in claim 13
wherein the light source is a plurality of light emitting diodes.

15. (Cancelled)

16. (Currently Amended) The lighting device described in claim [[15]] 18 further
including a cylindrical rod lens aligned with each of the light emitting ends of the optical fibers
of each of the multiple light emitting parts to form the line of light on the predetermined surface.

17. (Previously Presented) The lighting device described in claim 16 where the light
source is a plurality of light emitting diodes.

18. (New) The line light irradiation device of claim 13 where the holding body has a
rectangular body with a plurality of separate light sources, one light source for each multiple
light emitting part, at least two multiple light emitting parts are connected to opposite ends of the
rectangular body and the light leading out end portions are positioned to extend parallel to the
5 respective ends of the rectangular body.

19. (New) The line light irradiation device of claim 18 wherein the holding body includes a bracket member mounting at least one of the binding parts, the bracket member is pivotally mounted in the holding body to enable a rotational movement of the mounted binding part to move the line of light of the mounted binding part from a position exterior of the
5 rectangular body.